

## ABSTRACT OF THE DISCLOSURE

A processor is defined by a new architectural feature called a Backing Register File, where a Backing Register File is a set of randomly accessible registers capable of  
5 holding values, and further are directly connected to the processor's register files. The processor's register files are in turn connected to the processor's execution units. A Backing Register File is visible and controllable by users, allowing them to make use of a larger local address space increasing execution unit throughput thereby, while not changing the size of the processor's register files themselves.

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